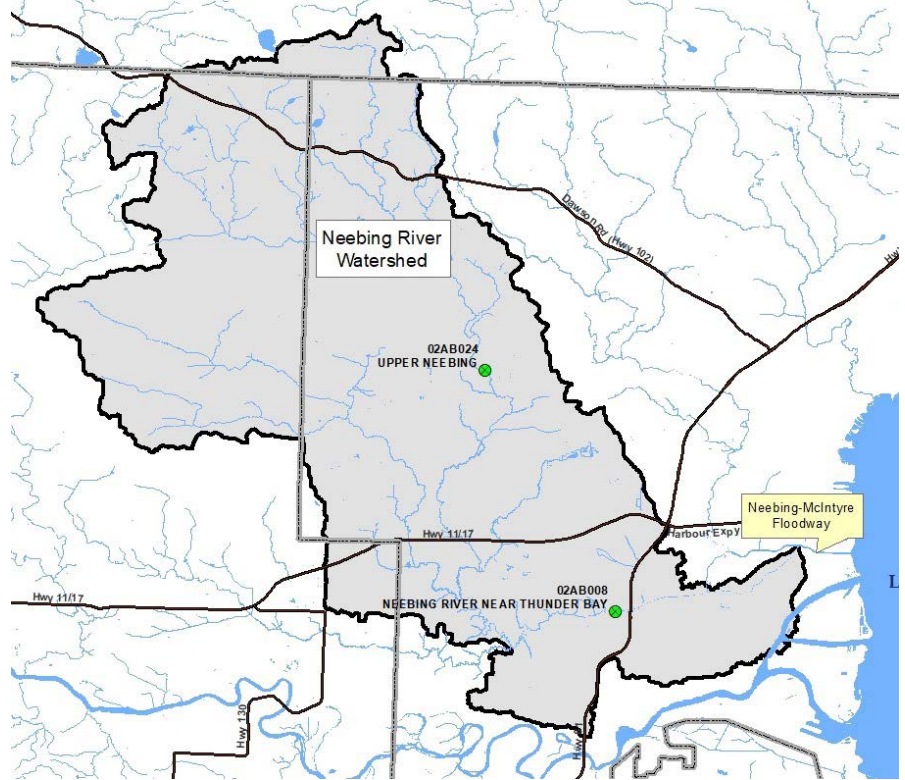




March, 2018

The Neebing River watershed extends along the westerly portion of the City of Thunder Bay and parts of the Municipality of Oliver Paipoonge. During normal flow conditions, the Neebing River drains south-easterly through the Neebing-McIntyre Floodway's Diversion Structure into the Lower Neebing River, which then flows into the widened deepened Neebing-McIntyre Floodway Channel which outlets into Lake Superior. During high water conditions, excess flow from the Neebing River is diverted into the Neebing-McIntyre Floodway's Diversion Channel, limiting the flow in the Lower Neebing River to the capacity of the channel, thereby protecting the Lower Neebing River and Intercity Area from riverine flooding. The LRCA in partnership with Environment Canada operate two streamflow gauges and tipping bucket precipitation gauges on the Neebing River.

|   |  |
|---|--|
| Watershed Size  | 227.7 square kilometres  |
| Length of River   | 55.7 kilometres  |
| Average Channel Slope   | 3.1%   |
| Average Channel Width (Upper)   | 4.5 metres   |
| Average Channel Width (Lower)   | 11 metres  |
| Average Bank Height (Upper)   | 0.5 - 2 metres   |
| Average Bank Height (Lower)   | 7-8 metres   |
| Thermal Regime  | Cold Water   |
| Streamflow Gauge/<br>Precipitation Gauge<br>Location (1953 to<br>present) | 2AB008:<br>Arthur Street Market<br>Place   |
| Streamflow Gauge/<br>Precipitation Gauge<br>Location (2007 to<br>present) | 02AB024:<br>Corner of<br>Thompson Road and<br>John Street Road   |
| Flow at Streamflow<br>Gauge Location during<br>Regional Storm             | 2AB008: 128 cubic<br>metres per second<br>02AB024: 27 cubic<br>metres per second   |
| Highest Recorded<br>Instantaneous Flow at<br>Gauge Site                   | 02AB008: May 2012<br>approximately 124<br>cubic metres per<br>second<br>02AB024: June 2008<br>approximately 13.7<br>cubic metres per<br>second |








*Neebing River Watershed*



Floodplain mapping studies were completed in 1985 and updated in 2018 on the Neebing River to determine the Regulated Floodplain. The floodplain is considered to be the watercourse area or area next to a watercourse that is under water during a flooding event. The Regional Storm is the magnitude of storm that determines the floodplain for regulatory purposes. Maps have been prepared and are available from the Conservation Authority that detail the Regional floodplain and flood elevation along the Neebing River.

The Lakehead Region Conservation Authority monitors local conditions and administers the Flood Warning System for the City of Thunder Bay and all rural Member Municipalities of the LRCA. Flood Warning Messages are issued during flood events.

### FLOOD MESSAGING TERMINOLOGY:

|  |  |
|--|--|
|    | <b>NORMAL:</b> Conditions are within NORMAL limits. No flooding is expected.   |
|    | <b>WATERSHED CONDITIONS STATEMENT- WATER SAFETY:</b> High flows, unsafe banks, melting ice or other factors could be dangerous for recreational users such as anglers, canoeists, hikers, children, pets, etc. Flooding is not expected. |
|    | <b>WATERSHED CONDITIONS STATEMENT- FLOOD OUTLOOK:</b> Early notice of the potential for flooding based on weather forecasts calling for heavy rain, snow melt, high wind or other conditions.  |
|   | <b>FLOODWATCH:</b> Indicates that there is the <u>potential</u> for flooding within specific watercourses and municipalities.  |
|  | <b>FLOOD WARNING:</b> Indicates that <u>flooding is imminent or occurring</u> within specific watercourses and municipalities.   |

Residents living near floodplains should pay attention to local flooding conditions in their area and be on alert for flood messaging. Residents should also prepare their individual flood emergency plans to be prepared in the event of a flood.

During flooding events some roads and watercrossings will be overtopped. Residents should never drive through a flooded section of road as the condition of the road and depth of flooding is not apparent and can be dangerous.

### Definitions:

**Regulated Floodplain:** The main stream/river channel plus the area of land adjacent to the river or stream that is flooded (i.e. under water). The regulated floodplain on the Neebing River is calculated using the Regional Storm.

**Regional Storm:** Storm that occurred in Timmins, Ontario in 1961 in which 193 millimetres of rain fell in 12 hours. In most cases the Regional Storm exceeds the 100-year storm.

**100-Year Storm:** Storm that on average should occur every 100 years; however, has a 1% chance of occurring or being exceeded in any given year.